

# Physical Science Exam Reference Sheet

## Formulas

Speed:  $s = \frac{d}{t}$

Average Velocity:  $v = \frac{\Delta x}{\Delta t}$

Acceleration:  $a = \frac{\Delta v}{\Delta t}$

Newton's 2<sup>nd</sup> Law:  $F = m \cdot a$

Force due to Gravity:  $F = W = m \cdot g$

Gravitational Potential Energy:  $PE = m \cdot g \cdot h$

Kinetic Energy:  $KE = \frac{1}{2} \cdot m \cdot v^2$

Wave Velocity:  $v = \lambda \cdot f$

## Units

Force:  $1N = 1 \frac{kg \cdot m}{s^2}$

Energy:  $1J = 1N \cdot m$

## Constants

Acceleration due to gravity:  
 $g = 9.8 \frac{m}{s^2}$

Speed of light in a vacuum:  
 $c = 3.0 \times 10^8 \frac{m}{s}$